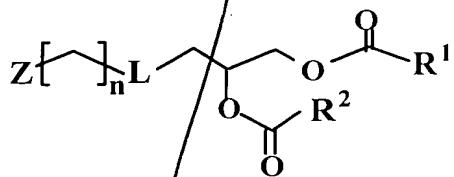


ABSTRACT

*pink  
A6*  
A lipid represented by the formula:



wherein each of  $R^1$  and  $R^2$  is an alkyl or alkenyl chain having between about 8 to about 24 carbon atoms;  $n = 1-20$ ;  $L$  is selected from the group consisting of (i)  $-X-(\text{C}=\text{O})-\text{Y}-\text{CH}_2-$ , (ii)  $-X-(\text{C}=\text{O})-$ , and (iii)  $-X-\text{CH}_2-$ , wherein  $X$  and  $Y$  are independently selected from oxygen, NH and a direct bond; and  $Z$  is a weakly basic moiety that has a pK of less than about 7.4 and greater than about 4.0 is described.